Regresion Models Project

joez

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Instructions

You work for Motor Trend, a magazine about the automobile industry. Looking at a data set of a collection of cars, they are interested in exploring the relationship between a set of variables and miles per gallon (MPG) (outcome). They are particularly interested in the following two questions:

1) "Is an automatic or manual transmission better for MPG"
2) "Quantify the MPG difference between automatic and manual transmissions"

Review criteria

Peer Grading

The criteria that your classmates will use to evaluate and grade your work are shown below. Each criteria is binary: (1 point = criteria met acceptably; 0 points = criteria not met acceptably)

Criteria

1) Did the student interpret the coefficients correctly?
2) Did the student do some exploratory data analyses?
3) Did the student fit multiple models and detail their strategy for model selection?
4) Did the student answer the questions of interest or detail why the question(s) is (are) not answerable?
5) Did the student do a residual plot and some diagnostics?
6) Did the student quantify the uncertainty in their conclusions and/or perform an inference correctly?
7) Was the report brief (about 2 pages long) for the main body of the report and no longer than 5 with supporting appendix of figures?
8) Did the report include an executive summary?
9) Was the report done in Rmd (knitr)?

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

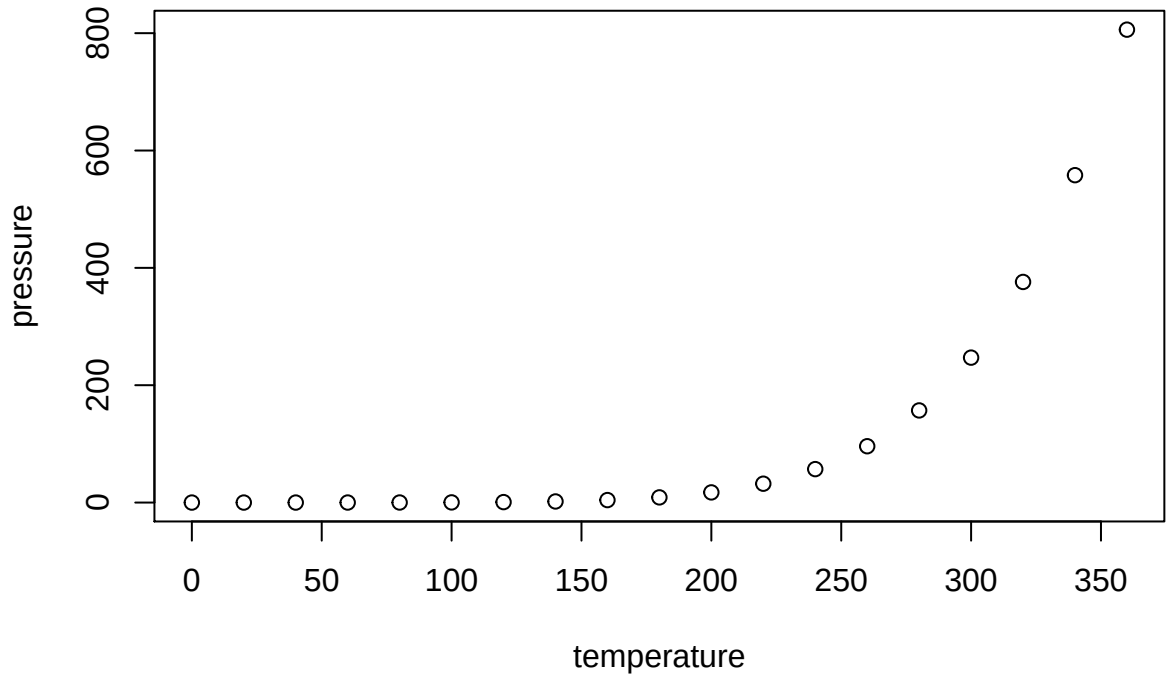
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
##      speed           dist       
##  Min.   : 4.0   Min.   :  2.00  
##  1st Qu.:12.0   1st Qu.: 26.00  
##  Median :15.0   Median : 36.00  
##  Mean   :15.4   Mean   : 42.98  
##  3rd Qu.:19.0   3rd Qu.: 56.00  
##  Max.   :25.0   Max.   :120.00
```

Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.